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PATENT SPECIFICATION



Application Date: Sept. 11, 1924. No. 21,511/24.

235,434

Complete Accepted: June 18, 1925.

COMPLETE SPECIFICATION.

Improvements in Tongs for Gripping Pipes or other Round Articles.

I, ALEXANDER IVANOVITCH MANCHO, a Russian citizen, of Soviet House, 49, Moorgate, London, E.C. 2, do hereby declare the nature of this invention (as communicated to me from abroad by Karl Ridel, a Russian citizen, of Azneft Boring Section, Baku, Russia), and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to gripping tongs adapted to be applied to pipes or other circular articles of the kind in which a plurality of jaws pivoted the one upon the other are lapped around the pipe or the like and tightened thereon by means of a lever upon which the first jaw is pivoted and which is adapted to engage the end of the last jaw so as to draw it tightly around the pipe.

The present invention consists essentially in an improved construction of pipe tongs of this character wherein the lever and a plurality of gripping jaws are hinged together in a closed series, the lever having a hook engaging a cooperating pin in the last jaw of the series and being subject to the action of a spring tending to maintain this locking engagement of lever and jaw when the tension on the lever is released.

The invention will be more specifically described with reference to the accompanying drawings, wherein Fig. 1 is a side elevation and Fig. 2 a plan view of a construction of tongs embodying the invention; Figs. 3 and 4 are similar views showing a slightly modified construction.

The apparatus shown in Figs. 1 and 2 comprises three jaws A, B, C and a handle or lever D which are pivotally connected in series with each other, the

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lever D having a hook E adapted to engage a transverse pin F in the end of the jaw C, which is bifurcated to accommodate the nose of the lever. The first or main jaw A has a bifurcated end carrying a transverse pin G upon which the lever D is fulcrumed. The outer ends of the jaws A and C are bifurcated and carry transverse pins H and I upon which the two ends of the intermediate jaw B are hinged. A spring J reacts upon the lever D and the main jaw A so as to urge the nose E of the lever into engagement with the cooperating locking pin F, so that when pressure on lever D is released to enable the tool to be shifted around or along the pipe the jaw C and lever D will not become unlocked, but will be held in locking engagement with each other when the tension on the lever is relaxed. As shown in the drawing the spring J is in the form of a flat or leaf spring secured by setscrews to the upper edge of the lever D and bearing with its free end upon the upper edge of the jaw A, but any other form of spring reacting upon these two parts so as to urge the elements of the lock E, F into engagement with each other may be substituted.

The modified construction of Figs. 3 and 4 does not differ in any material respect from that of Figs. 1 and 2, except for the omission of the intermediate jaw B, the two jaws A and C providing each of them substantially semi-circular gripping surfaces. The inside or gripping surfaces of the jaws are preferably perfectly smooth and when closed, as shown in Figs. 1 and 3, form substantially continuous portions of a circle and by reason of the powerful action of the lock E, F they can grip even a polished surface absolutely tight, with no tendency whatever to slide around it and consequently

no possibility of damage or wear of the gripped article.

The main jaw A is shown as formed with a hole or hollow K at its widest part; this is introduced to lighten the tool as much as possible without affecting its strength.

To support the tongs and facilitate rotation of same there is shown in Fig. 2 a suspension block or bearing L the bore of which is square to fit the section of the lever, while the periphery is circular and formed with a groove M which provides a bearing surface for the end link N of a supporting chain, this end link being formed with a circular portion of approximately the same internal diameter as the groove M.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to

be performed, I declare that what I claim is:—

1. Gripping tongs of the character herein referred to, wherein a lever and a plurality of gripping jaws are hinged together in a closed series, the lever having a hook engaging a cooperating pin in the last jaw and being subject to the action of a spring tending to maintain this locking engagement of lever and jaw when the tension on the lever is released, substantially as described.

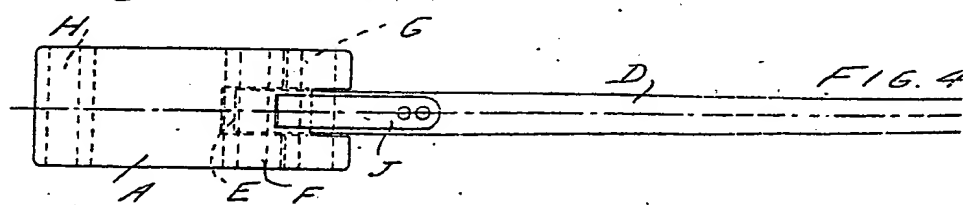
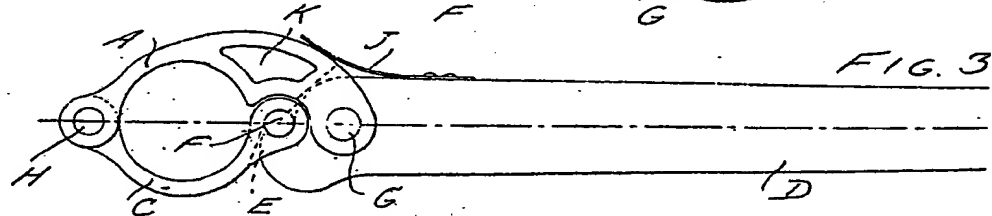
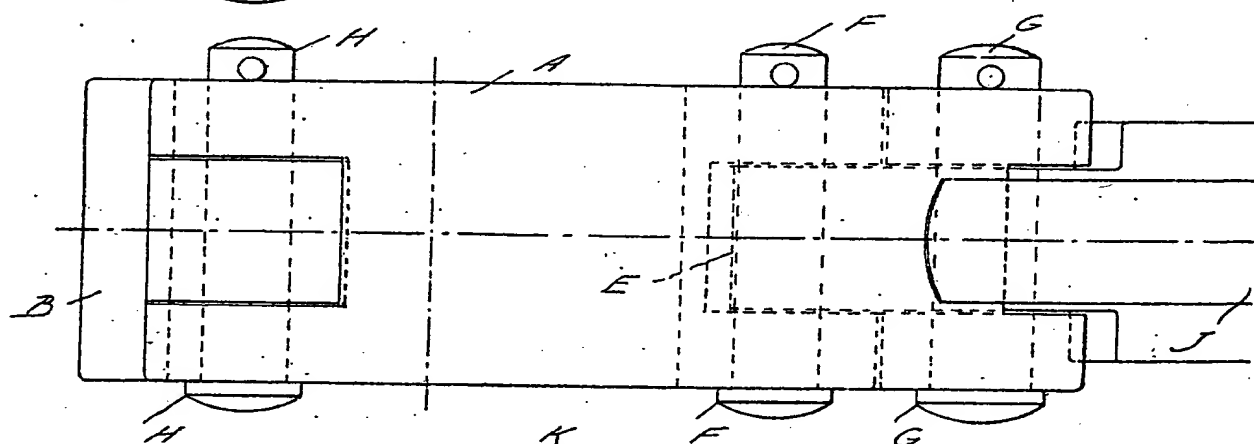
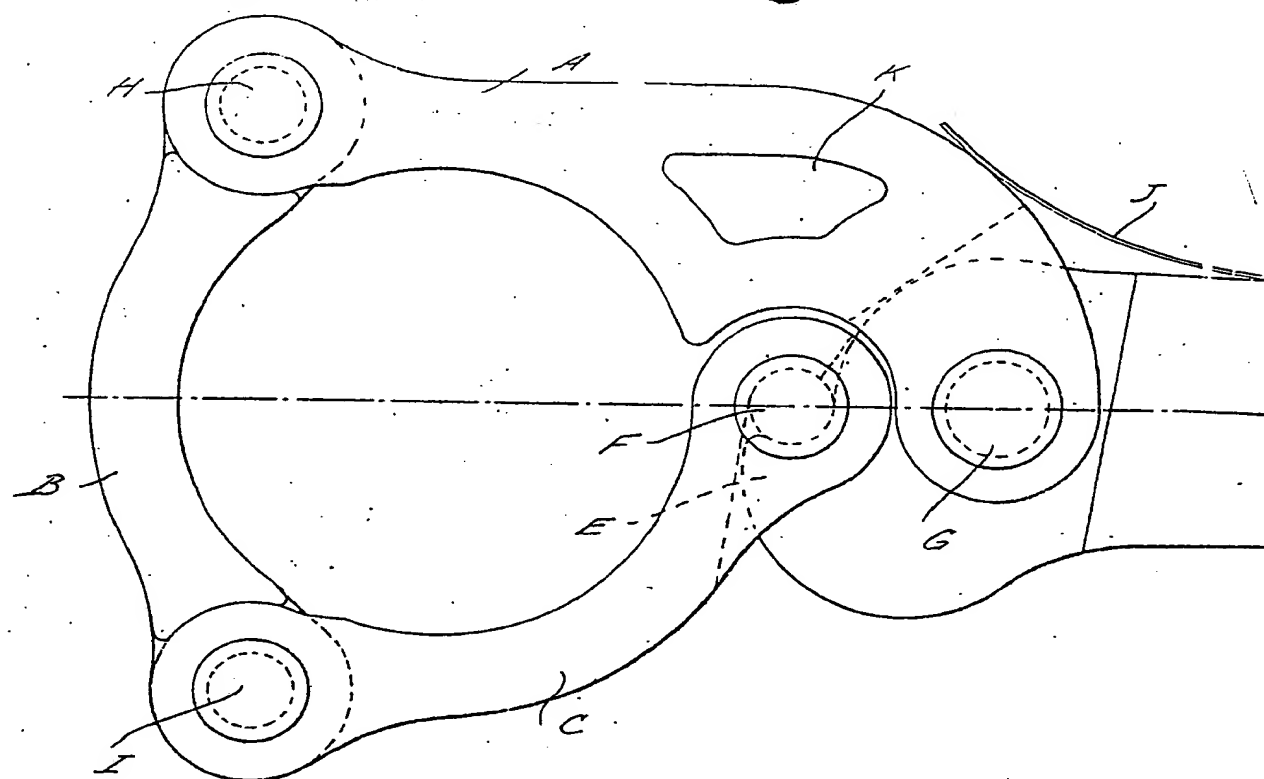
2. Gripping tongs according to Claim 1, constructed substantially as herein described with reference to the accompanying drawings.

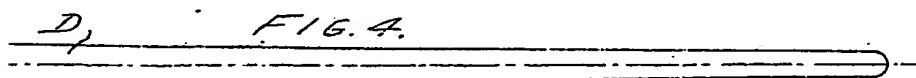
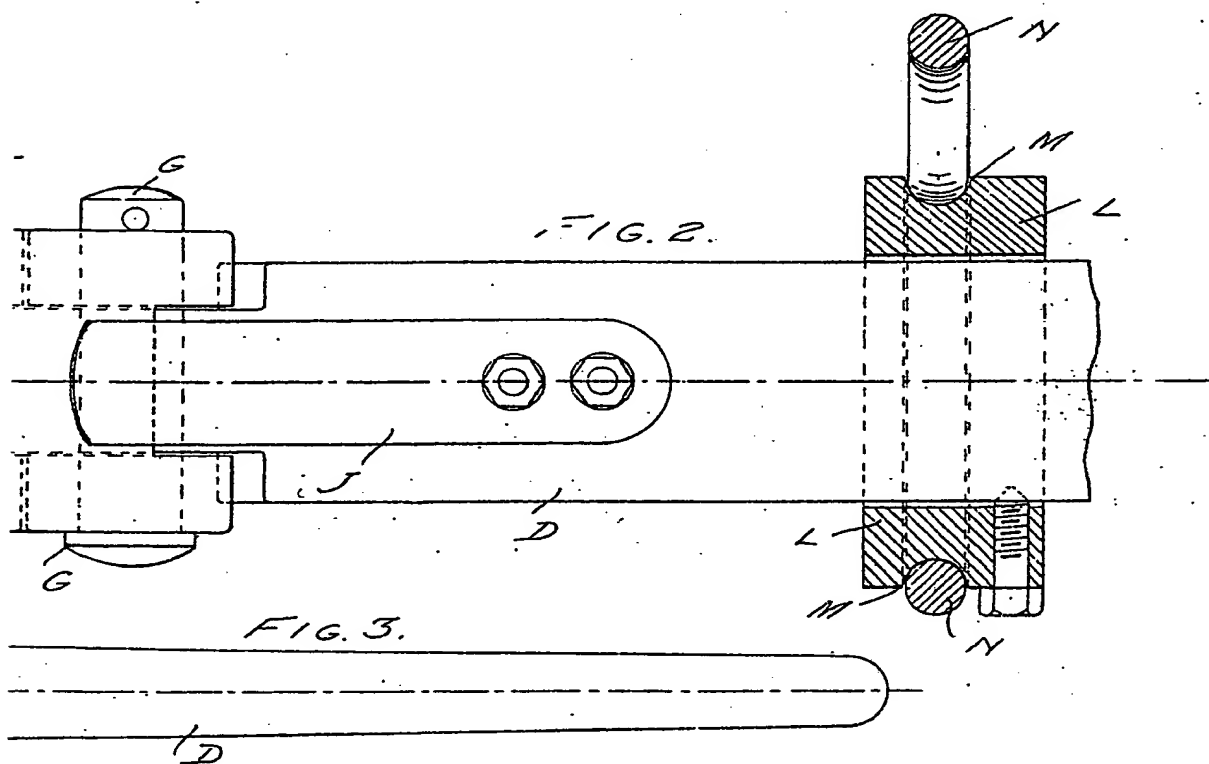
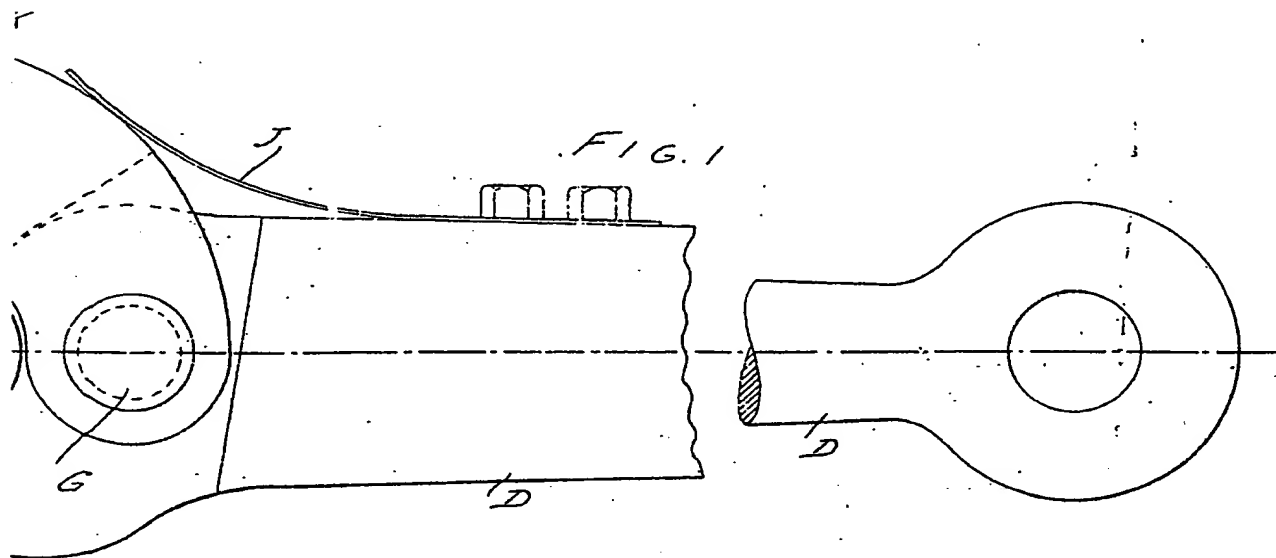
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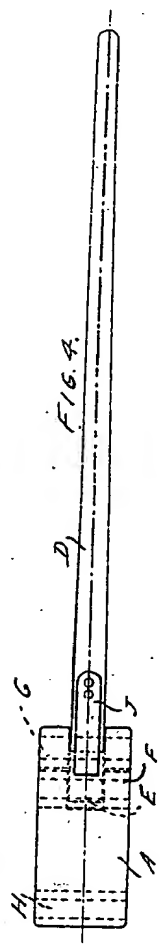
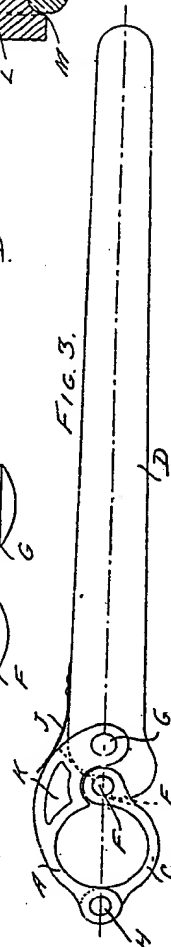
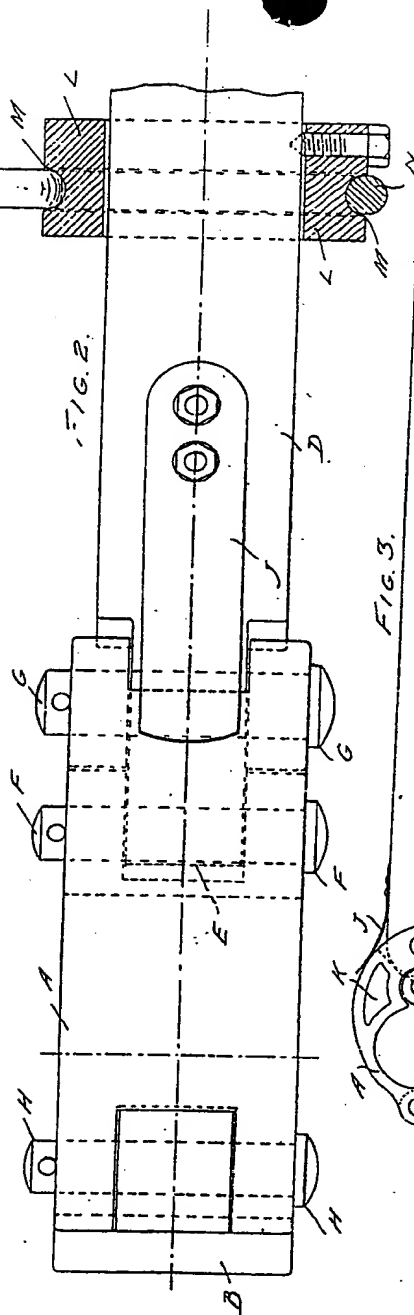
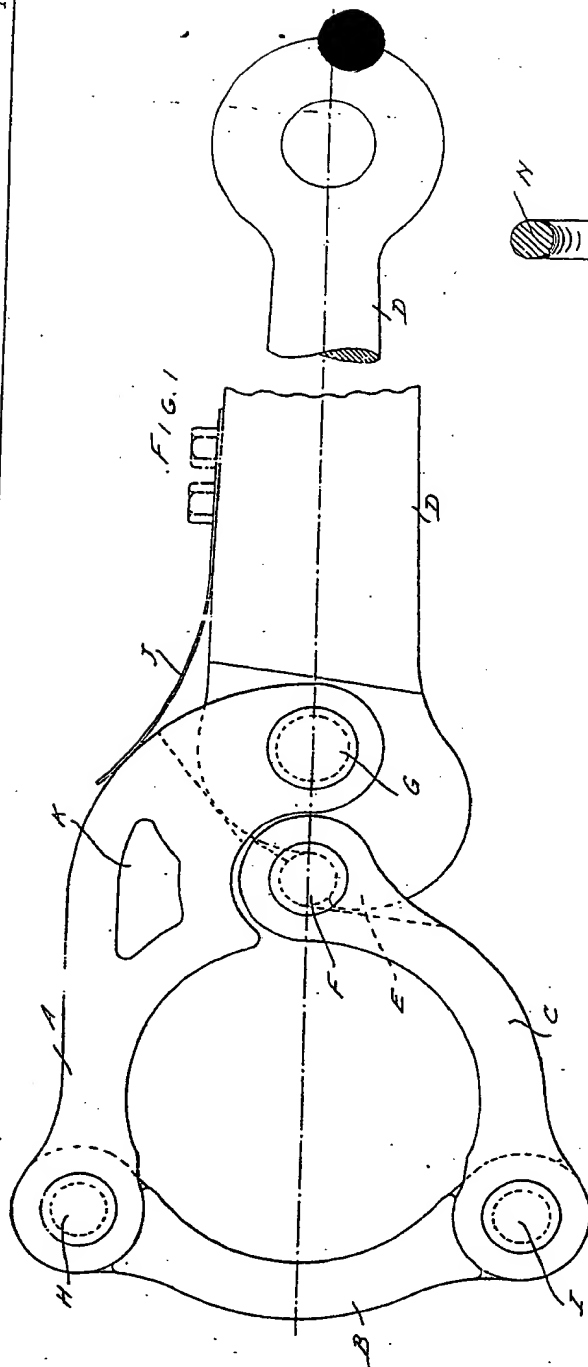
ABEL & IMRAY,

Agents for the Applicant,
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W.C. 2.

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